



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,587	08/22/2005	Lothar Patberg	20496-461	2536
42532	7590	11/15/2007	EXAMINER	
PROSKAUER ROSE LLP			FERGUSON, MICHAEL P	
ONE INTERNATIONAL PLACE			ART UNIT	
BOSTON, MA 02110			PAPER NUMBER	
			3679	
			MAIL DATE	
			DELIVERY MODE	
			11/15/2007	
			PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/509,587

Applicant(s)

PATBERG, LOTAR

Examiner

Michael P. Ferguson

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date 09/29/04, 10/26/07.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Examiner notes that the restriction requirement mailed April 27, 2007 has been withdrawn.

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Objections

2. Claims 1, 2, 4 and 5-7 are objected to because of the following informalities:

Claim 1 (line 1) recites "joint, structure, made". It should recite --joint structure made--.

Claim 1 (line 2) recites "which the first hollow profile has". It should recite

--comprising a first hollow profile having--.

Claim 1 (lines 2-3) recites "and is cut through around". It should recite --and a separating cut around--.

Claim 1 (line 4) recites "this web, and the second hollow profile has". It should recite --the web; and a second hollow profile having--.

Claim 1 (line 5) recites "the ends of". It should recite --ends of--.

Claim 1 (line 6) recites "result through the cutting". It should recite --result from cutting--.

Claim 1 (line 7) recites "the edge regions". It should recite --edge regions--.

Claim 2 (line 1) recites "wherein the contours". It should recite --wherein contours--.

Claim 4 (lines 1-2) recites "wherein, in the regions of the edges of the first hollow profile, quadrilateral". It should recite --wherein the edge regions of the first hollow profile comprise quadrilateral--.

Claim 4 (line 2) recites "to the edge". It should recite --to an edge--.

Claim 4 (line 3) recites "radius, are cut". It should recite --radius, and are cut--.

Claim 5 (lines 1-2) recites "the cut-out cutouts". It should recite --the cutouts--.

Claim 6 (lines 7-8) recites "placing the two planar sides of a second hollow profile, which has two directly neighboring planar sides, on the ends". It should recite --placing two directly neighboring planar sides of a second hollow profile on ends--.

Claim 6 (line 9) recites "result through". It should recite --result from--.

Claim 6 (lines 10-11) recites "at these edge regions". It should recite --at edge regions--.

Claim 7 (lines 3-4) recites "the planar surface and the separating cut". It should recite --the planar side and a separating cut--.

For the purpose of examining the application, it is assumed that appropriate correction has been made.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 6, 7 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Showa Aluminum (JP 8061329).

As to claim 1, Showa Aluminum discloses a three-dimensional joint structure made of two hollow profiles, of a support frame for vehicles, comprising a first hollow profile **2** having at least one planar side **10** and a separating cut **12** around its circumference in one single plane except for a web **2a** lying in the planar side and is bent around the web; and a second hollow profile **1** having at least two directly neighboring planar sides **1a**, which press against ends **11** of the first hollow profile facing toward one another, which are capable of resulting from cutting and bending, the two hollow profiles being integrally joined to one another at edge regions of the first hollow profile (Figures 6 and 7, abstract).

As to claim 2, Showa Aluminum discloses a joint structure wherein contours of the two hollow profiles **1,2** press against one another without gaps (Figure 6).

As to claim 6, Showa Aluminum discloses a method for manufacturing a joint structure comprising the following method steps:

cutting through a first hollow profile **2** having at least one planar side **10** around its circumference in one single plane except for a web **2a** lying in the planar side,

bending the first, partially cut-through hollow profile around the web lying in the planar side,

placing two directly neighboring planar sides **1a** of a second hollow profile **1** on ends **11** of the first hollow profile facing toward one another, which result from the cutting and bending, and

integrally joining the second hollow profile to the first hollow profile at edge regions (Figures 6 and 7, abstract).

As to claim 7, Showa Aluminum discloses a method wherein, before the cutting, the first hollow profile **2** is deformed around its circumference except for a web **2a** lying in the planar side **10** and a separating cut **12** is laid through the middle of the deformation (Figure 7).

As to claim 10, Showa Aluminum discloses a method wherein the hollow profiles **1,2** are joined by welding or soldering (abstract).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Showa Aluminum in view of Hoover (US 809,061).

As to claim 3, Showa Aluminum fails to disclose a joint structure wherein the first hollow profile has projecting edge regions on its ends facing toward one another, which press against the second hollow profile.

Hoover teaches a joint structure wherein a first hollow profile **B** has projecting edge regions **H** on ends facing toward one another, which press against a second profile member **A**; the projecting edge regions **H** providing for quick and secure assembly of the joint structure as the projections conform to the second profile member, enabling the first hollow profile to seat in a secure, stable manner on the second profile member prior to permanent rigidly attaching the two members together, and providing for greater strength and rigidity of the joint (Figures 2 and 3, page 1 lines 15-21, 84-107). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the joint structure disclosed by Showa Aluminum to have projecting edge regions as taught by Hoover in order to provide for quick and secure assembly of the joint structure as the projections conform to the second hollow profile, enabling the first hollow profile to seat in a secure, stable manner on the second hollow profile prior to welding the two members together, and providing for greater strength and rigidity of the joint.

As to claims 4 and 5, Showa Aluminum fails to disclose a joint structure wherein the edge regions of the first hollow profile comprise quadrilateral cutouts, curved corresponding to an edge radius, which extend along the separating cut over the entire edge radius, and are formed symmetrically to the separating cut; wherein the cutouts have rounded corners.

Applicant is reminded that **process limitations are given little patentable weight in product claims** since the patentability determination of product-by-process claims is based on the product itself, even though such claims are limited and defined by the process. See MPEP § 2113. "The patentability of a product does not depend on its method of production." In re Thorpe, 777 F.2d 695,698,USPQ 964,966 (Fed.Cir.1985). Accordingly, the process limitation of cutting-out the cutouts within claim 4 is given little patentable weight; claim 4 only requires cutouts which extend along the separating cut, which are capable of resulting from the process of cutting.

Hoover teaches a joint structure wherein edge regions of first hollow profile **B** comprise quadrilateral cutouts **H**, curved corresponding to an edge radius, which extend along a separating cut **F** over the entire edge radius, and are formed symmetrically to the separating cut; wherein the cutouts have rounded corners; the cutouts **H** providing for quick and secure assembly of the joint structure as the cutouts conform to second profile member **A**, enabling the first hollow profile to seat in a secure, stable manner on the second profile member prior to permanent rigidly attaching the two members together, and providing for greater strength and rigidity of the joint (Figures 2 and 3, page 1 lines 15-21, 84-107). Accordingly, it would have been obvious to one having

ordinary skill in the art at the time the invention was made to modify the joint structure disclosed by Showa Aluminum to have cutouts as taught by Hoover in order to provide for quick and secure assembly of the joint structure as the cutouts conform to the second hollow profile, enabling the first hollow profile to seat in a secure, stable manner on the second hollow profile prior to welding the two members together, and providing for greater strength and rigidity of the joint.

7. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Showa Aluminum in view of Janotik et al. (US 5,332,281).

As to claim 8, Showa Aluminum fails to disclose a method wherein the deformation is introduced into the first hollow profile through hydroforming.

Janotik et al. teach a method wherein deformation is introduced into a first hollow profile **118** through hydroforming; hydroforming enabling one to use preformed metal tubing to form a joint structure, enabling one to reduce the fabrication and assembly costs (Figure 4, column 2 lines 12-27, column 5 lines 41-47). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method disclosed by Showa Aluminum wherein the first hollow profile is deformed through hydroforming as taught by Janotik et al. in order to enable one to use preformed metal tubing to form the joint structure, enabling one to reduce the fabrication and assembly costs.

As to claim 9, Showa Aluminum fails to disclose a method wherein the first hollow profile is cut through laser beam cutting.

Janotik et al. teach a method wherein the first hollow profile is cut through laser beam cutting; laser beam cutting enabling one to use preformed metal tubing to form a joint structure, enabling one to reduce the fabrication and assembly costs (Figure 4, column 2 lines 12-27, column 6 lines 37-40). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method disclosed by Showa Aluminum wherein the first hollow profile is cut through laser beam cutting as taught by Janotik et al. in order to enable one to use preformed metal tubing to form the joint structure, enabling one to reduce the fabrication and assembly costs.

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Showa Aluminum in view of Peck et al. (US 5,190,207).

As to claim 11, Showa Aluminum fails to disclose a method wherein the welding or soldering is performed using laser beams.

Peck et al. teach a method wherein the welding or soldering is performed using laser beams; robotic laser beam welding providing a high level of precision and repeatable weld quality in the assembly process of a joint structure (column 1 line 66-column 2 line 6, column 3 lines 35-51). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method disclosed by Showa Aluminum wherein robotic laser beam welding is performed as taught by Peck et al. in order to provide a high level of precision and repeatable weld quality in the assembly process of the joint structure.

Conclusion

The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure. The following patent shows the state of the art with respect to joint structures:

Murray, Jr. (US 1,601,140) is cited for pertaining to joint structures comprising hollow profiles joined by bend portions and welds.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Ferguson whose telephone number is (571)272-7081. The examiner can normally be reached on M-F (6:30am-3:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571)272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/509,587
Art Unit: 3679

Page 11

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


MPF
11/01/07



DANIEL P. STODOLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600